

# First records of *Pararge aegeria* and *Cacyreus marshalli*, and a verification of *Muschampia proto* from the Greek Island of Rhodes. First records of *Cacyreus marshalli* and *Gegenes* sp. from the Greek Island of Tilos; Dodecanese Complex S. E. Aegean (Lepidoptera: Hesperioidea & Papilionoidea)

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**Abstract.** The presence of *Pararge aegeria* (Linnaeus, 1758) and *Cacyreus marshalli* (Butler, 1898) is documented for the first time from the Greek island of Rhodes, the existence of *Muschampia proto* (Ochsenheimer, 1808) is also verified for the first time by a picture. During a visit in early autumn to south-eastern Greek island of Tilos two new species were recorded, *Cacyreus marshalli* (Butler, 1898) and *Gegenes* sp. The geographical position of both islands (fig. 1), as well as all the species and all the localities from where butterflies were observed and photographed are illustrated. On account of these observations the total number of observed species in both islands is discussed.

**Samenvatting.** Eerste vermelding van *Pararge aegeria* en *Cacyreus marshalli*, en een bevestiging van het voorkomen van *Muschampia proto* op het Griekse eiland Rhodos. Eerste vermelding van *Cacyreus marshalli* en *Gegenes* sp. voor het Griekse eiland Tilos (Lepidoptera: Hesperioidea & Papilionoidea)

Het voorkomen van *Pararge aegeria* (Linnaeus, 1758) en *Cacyreus marshalli* (Butler, 1898) op het Griekse eiland Rhodos wordt hier voor de eerste maal gedocumenteerd en de aanwezigheid op dat eiland van *Muschampia proto* (Ochsenheimer, 1898) wordt met een foto bewezen. Tijdens een bezoek in de vroege herfst aan het Zuidoost-Egeïsche eiland Tilos werden twee nieuwe soorten voor dat eiland waargenomen: *Cacyreus marshalli* (Butler, 1898) en *Gegenes* sp. De geografische ligging van beide eilanden wordt op fig. 1 aangegeven, alsook alle plaatsen waar dagvlinders geobserveerd en gefotografeerd werden. Op grond van deze waarnemingen wordt het totaal aantal dagvlindersoorten op deze eilanden besproken.

**Résumé.** Première observation de *Pararge aegeria* et *Cacyreus marshalli* sur l'île grecque de Rhodes, ainsi que confirmation de la présence de *Muschampia proto*. Première observation de *Cacyreus marshalli* et de *Gegenes* sp. sur l'île grecque de Tilos (Lepidoptera: Hesperioidea & Papilionoidea)

La présence de *Pararge aegeria* (Linnaeus, 1758) et *Cacyreus marshalli* (Butler, 1898) est confirmée pour la première fois sur l'île grecque de Rhodes, l'existence de *Muschampia proto* (Ochsenheimer 1808) est également confirmée pour la première fois par une photo. Lors d'une visite au début de l'automne vers le sud-est de l'île grecque de Tilos, deux nouvelles espèces ont été recensées : *Cacyreus marshalli* (Butler, 1898) et *Gegenes* sp. La situation géographique des deux îles (fig.1), ainsi que toutes les espèces et toutes les localités où les papillons ont été observés et photographiés, sont illustrées. Compte tenu de ces observations, le nombre total d'espèces observées sur les deux îles est discuté.

**Key words:** Greece – Dodecanese Complex – Rhodes – Tilos – Rhopalocera – *Pararge aegeria* – *Cacyreus marshalli* – *Muschampia proto* – *Gegenes*.

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According to the literature (Olivier 1993, 2000, Dennis *et al.* 2000, 2001, Tolman & Lewington 2008, Pamperis 2009, Cuvelier & Mølgaard 2012) the presence of *Pararge aegeria* (Linnaeus, 1758) and *Cacyreus marshalli* (Butler, 1898) on the island of Rhodes, as well as the presence of *Cacyreus marshalli* (Butler, 1898) and *Gegenes* sp. on the island of Tilos has never been reported so far. The first two records that follow (*P. aegeria*, *C. marshalli*) are the first-ever known for the island of Rhodes (where the author lives permanently), and the latter two for the island of Tilos.

## First records from Rhodes

An individual of *Pararge aegeria* (fig. 2) located by the author at the field, on 17 May 2013, next to the chapel of Timios Prodromos (fig. 3), about 1 km SE of Rodini Park (located within Rhodes town limits). The butterfly was observed at an altitude of 80 m and about 1.5 km from the eastern coast line, flying about and resting on the ground in a damp, shady and stony location in woodland, composed mainly of *Quercus ithaburensis* spp.

*macrolepis*, *Quercus coccifera*, *Olea europea*, scrubs like *Capparis spinosa* and many plants of the Asteraceae family.

During a field trip on 10 October 2013 to the Medieval moat of the Grand Master Palace (fig. 4) north of Rhodes town, a specimen of *Cacyreus marshalli* (fig. 5) was observed and photographed at sea level. The butterfly was nectaring on *Vitex agnus castus* flowers on dry and stony ground.

## First verification of *Muschampia proto* from Rhodes island

According to the literature (Olivier 1993, 2000; Dennis *et al.* 2000, Tolman & Lewington 2008) *Muschampia proto* has never been included amongst the species that occur on Rhodes Island, but see Cuvelier & Mølgaard hereafter. Dr. H. Anastassiou (pers. com.), in agreement, as he said, with J. G. Coutsis and N. Ghavalas, confirmed knowing no other records to date from Rhodes. On the other hand L. Pamperis (2009), in his book *The butterflies of Greece*, indicated a single locality

for this species from Rhodes in his distribution map. Later, however, he admitted (pers. com.) that this was done on the basis of a single record from the as yet unpublished work: *The Lepidoptera of Greece and Cyprus*, by L. Gozmány. Obviously, this record from Rhodes was regarded as being doubtful, needing confirmation, which has now been made. Moreover, *M. proto* was recently included in the total species number of Rhodes by Cuvelier & Mølgaard (2012). Cuvelier (pers. com.) confirmed that he found/observed a specimen

from Rhodes, without further faunistic data, in a box of a collector during an entomological meeting in Belgium.

*Muschampia proto* was recorded from Rhodes on the basis of a single individual photographed by the author on 26 September 2013 (fig. 6) on the summit of Filerimos Hill, 8 km south-west of Rhodes town. The butterfly flew close to the ground inside a pine forest clearing around the Acropolis of Ialiso (fig. 7), at an altitude of about 300 m, and fed on *Heliotropium hirsutissimum* flowers.



Fig.1 Geographical position of the Islands of Rhodes and Tilos in the S. E. Aegean Sea.



Fig. 2.– *Pararge aegeria*, Rhodes, Chapel of Timios Prodromos, 80 m, 17.v.2013, 13:34:59 pm; Fig. 3.– Habitat of *Pararge aegeria*, Rhodes, Chapel of Timios Prodromos, 17.v.2013, 13:40:12 pm.





Fig. 4.– *Cacyreus marshalli*, Rhodes, Medieval moat – Grand Master Palace, 0 m, 10.x.2013, 13:10:41 pm; Fig. 5.– Habitat of *Cacyreus marshalli*, Rhodes, Medieval moat – Grand Master Palace, 10.x.2013, 13:17:27 pm.



Fig. 6.– *Muschampia proto*, Rhodes, Filerimos Hill, about 300 m, 26.ix.2013, 12:21:08 pm; Fig. 7.– Habitat of *Muschampia proto*, Rhodes, Filerimos Hill, 26.ix.2013, 12:27:30 pm.

### First records from Tilos

During a trip in early autumn (28–30.x.2013) to the island of Tilos the author observed and photographed two new species for this island, *Cacyreus marshalli* and *Gegenes* sp., both of which were not included in the island's fauna by Olivier (1993, 2000), Dennis *et al.* (2000), Pamperis (2009), or Cuvelier & Mølgaard (2012). A small number (3–4) of *Gegenes* sp. were observed on 28 September 2013 in the surrounding area of the harbour at Livadia (fig. 10), at sea level, just 20 m from the coast line. One of them (fig. 8) flew around an open, very hot and dry field, near the coast, resting on dry *Heliotropium hirsutissimum* flowers. The identification of *Gegenes* sp. is based on external characters, without DNA analysis or genitalia dissection. However, it is likely to be *Gegenes pumilio* (Hoffmansegg, 1804) as, according to the literature, the presence of *Gegenes nostradamus* (Fabricius, 1794) has never been reported so far from the islands of the Dodecanese Complex.



Fig. 8.– *Gegenes* sp., Tilos, Livadia harbour, 0 m, 28.ix.2013, 11:53:37 am.

On 30 September 2013 two individuals of *Cacyreus marshalli* were located and one of them (fig. 9) was photographed in the square of Livadia (harbour), 5 m above sea level and 30 m from the coast line. The butterflies were observed flying together with some *Lampides boeticus* (Linnaeus, 1767), and feeding on cultivated plants such as *Plumbago capensis* and *Polygala myrtifolia*.





Fig. 9.— *Cacyreus marshalli*, Tilos, Livadia square (harbour), 5 m, 30.ix.2013, 14:56:02 pm; Fig. 10.— Habitat of *Cacyreus marshalli* and *Gegenes* sp., Tilos, Livadia harbour, 28.ix.2013, 16:23:17 pm.

### Conclusion

On the basis of the above records and according to the most recent available information (Cuvelier & Mølgaard 2012), the total number of species known from Rhodes amounts to 52, and from Tilos to 24. It is hoped, however, that further investigations of the Dodecanese butterfly fauna as a whole will be carried out in early spring and autumn, as both are periods for which there still is a paucity of information.

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### References

- Cuvelier S. & Mølgaard M. S. 2012. Butterflies and Skippers in the Dodecanese Islands (Greece): new data and an update on their distribution (Lepidoptera: Hesperioidea & Papilionoidea). — *Phegeo* **40**(3): 66–80.
- Dennis R. L. H., Shreeve T. G., Olivier A. & Coutsis J. G. 2000. Contemporary geography dominates butterfly diversity gradients within the Aegean archipelago (Lepidoptera: Papilionoidea, Hesperioidea). — *Journal of Biogeography* **27**: 1365–1383.
- Dennis R. L. H., Olivier A., Coutsis J. G. & Shreeve T. G. 2001. Butterflies on islands in the Aegean archipelago: predicting numbers of species and incidence of species using geographical variables. — *Entomologist's Gazette* **52**: 3–39.
- Dennis R. L. H., Olivier A. & Coutsis J. G. 2001. Butterflies on islands in the Aegean archipelago: a correction, additions, an aid to identification and a cautionary tale. — *Entomologist's Record and Journal of Variation* **113**: 265–268.
- Olivier A. 1993. *The butterflies of the Greek island of Ródos: taxonomy, founistics, ecology and phenology with a tentative synthesis on the biogeography of the butterflies of Kriti (Crete), Kórpathos, Ródos, the Eostem Aegeon islonds and Kipros (Cyprus) (Lepidoptero: Hesperioideo & Popilionoidea)*. — Vlaamse Vereniging Voor Entomologie, Antwerpen, 250 pp.
- Olivier A. 2000. The butterflies of the Greek island of Nissiros (Lepidoptera: Hesperioidea & Papilionoidea). — *Phegeo* **28**: 25–36.
- Pamperis L. N. 2009. *The butterflies of Greece. Second Edition revised and enlarged*. — Editions Pamperis, Athens, 766 pp.
- Tolman T. & Lewington R. 2008. *Collings Butterfly Guide: The most complete field guide to the Butterflies of Britain and Europe. Second Edition*. — Harper Collins Publishers, London, 384 pp.